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ABSTRACT

The English spoken by second generation Puerto Ricans in Harlem is influenced by black English heard in the surrounding community, standard English used in the school, and the Spanish-influenced English used by the first generation Puerto Rican community. The study of these influences is conducted according to recently developed sociolinguistic principles which state that various social dialects in the United States are not differentiated from each other by discrete sets of features but by variations in the frequency with which certain features occur. The author examines two phonological variables in Puerto Rican English and discusses the linguistic processes at work in the variations and the influences of contact with the dialects mentioned above. The author devises rules accounting for various constraints in the variations. The discussion of the variables helps to isolate several sociolinguistic principles concerning such concepts as vestigal interference, convergent processes, and assimilation variants. A case of grammatical variation is also considered in relation to the influencing dialects. A bibliography is included. (VM)

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OVERLAPPING INFLUENCE AND LINGUISTIC ASSIMILATION IN SECOND GENERATION PUERTO RICAN ENGLISH

1. Introduction

Although the literature on bilingualism is replete with studies of language interference in first generation immigrants to the United States, the study of linguistic assimilation of second generation children of these immigrants is rather sparse.[1] The study of English of second generation Puerto Ricans in Harlem is an attempt to remedy this lack of descriptive material on the English of a second generation immigrant group. More importantly, the study of this variety of English allows us to apply current sociolinguistic theory and methodology to a unique language contact situation.

The second generation Puerto Rican in Harlem is subjected to several different pressures in terms of language usage. In the home, and until he is of school age, a variety of Puerto Rican Spanish is typically the predominant language. As the child enters school and some of his contacts are expanded outside the immediate community, however, English becomes a competing language. And, by the time he is a teen-ager, English and Spanish fill specialized roles of communication depending on a number of different variables such as participant, topic, location, etc. (cf. Fishman, et al 1968 for a detailed account of these variables).

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On the one hand, we observe that there is a concentrated Puerto Rican community that maintains Puerto Rican Spanish to a considerable extent. The predominant language of these first generation Puerto Ricans is Spanish. On the other hand, however, second generation Puerto Ricans may extend their associations beyond the Puerto Rican community, through peer contacts residency, and school. In most cases the extension of peer contacts outside of the Puerto Rican community involves the surrounding black community in Harlem. This means that these Puerto Ricans are going to be exposed to Black English, (described for New York City by Labov, et al. 1968) as the major 'source' of English outside the Puerto Rican community. And, of course, in school there is the traditional pressure to conform to standard English. What we must look at then, is the relative influence of Black English from the surrounding black community, standard English in the school, and Spanish-influenced English from within the established first generation Puerto Rican community. This means that we are dealing with languages and dialects in contact. Some aspects of the structures of what we may call Puerto Rican English (PRE) in Harlem can be understood only through our knowledge of various nonstandard dialects of English, while others involve an understanding of Puerto Rican Spanish. Separating the sources from which the specific linguistic characteristics of PRE may be derived is, in itself, an important sociolinguistic problem which requires a thorough knowledge of the dynamics of language influence.

Although we may account for the occurrence of certain structures by investigating the structure of the competing language sources closely, this cannot be considered a study in bilingualism, for we are concerned here with only one of the languages spoken by our informants. Nor can it be considered a study of language interference in the strict sense, since

interference is a condition dependent upon bilingualism (cf. Weinreich 1953:11). We are concerned here mainly with phenomena which are not dependent on bilingualism; rather, we are interested in patterns which have become habitualised and established. Perhaps this can best be illustrated by drawing an analogy with English varieties spoken by children of German extraction in southern Pennsylvania. Our knowledge of German may help us account for some rather divergent dialect variations in southern Pennsylvania, but these features are not dependent on the bilingualism of second and third generation children of immigrants; they are features which must be described synchronically as an integral part of the dialect. The distinction between interference and established dialect variation is an important sociolinguistic matter which we shall turn to in Section 3 and 4 in more detail.

2. Sample

The analysis reported here is based on the spontaneous speech of 29 Puerto Rican and 15 black teenage males from East Herlem and the Bronx. With the exception of two informants, all of the parents of these informants were born in Puerto Rico and migrated to the United States as adults. The informants themselves, however, were born and raised in New York City. Although there has been considerable mobility by informants within East Harlem and the Bronx, the vast majority of informants have spent their entire lives in the same general area of New York City.

According to most of the current indices for objectively measuring socio-economic class, the informants would be classified as children of "working" or lower working" class parents. The occupational roles of the heads of households are mainly restricted to operatives, service workers

and laborers. Although we have not made evaluations of all the individual residences of the informants, a survey of the general neighborhoods and observation of a sample of the projects and tenements in which the informants live indicates that they are quite typical of working or lower-working class residences in Harlem. Many of the residences would clearly be classified as slum dwellings.

The school records of the informants further indicate that their educational achievement is far below the expected norms for their age level. This was true of their reading levels in particular, a fact which was well confirmed by a small reading passage which was given as a part of the interview. Several of the informants would have to be considered functionally illiterate and were unable to read even the word lists they were given. It is quite clear that the majority of our informants have been alienated from the schools and that their values do not coincide with the middle-class values placed on educational achievement. From the background information available to us, it appears that many of the informants can be considered integral members of indigenous peer groups, participating fully in the street culture of New York City.

Our contacts with the informants were established through Youth Development, Inc., a club-like organization with recreational facilities such as table billiards, ping pong, and a basketball court open to the public daily. During the summer months, the organization has established camp facilities at Lake Champion New York, where the same general activities available in the city are offered on an extended level. The fieldwork which serves as a basis for this analysis was conducted at the camp site.

The informants were not chosen randomly. Rather, a decision was made to start interviewing several informants who had considerable status among their peers. This decision was calculated in order to facilitate other

interviews. It was anticipated that other individuals would recognize that the leaders had been chosen initially, and to be asked for an interview would then be associated with status. It was further reasoned that positive reports from informants initially would enhance our chances of obtaining interviews with other informants.

Although somewhat of a risk (since negative reports by leaders would seriously hinder further interviewing), the procedure proved to be generally quite successdul in obtaining informants. The association of the interviews with peer status apparently was understood by other members. In fact, several peer associates of our original contacts asked to talk to us before we had an opportunity to request an interview.

After establishing contacts with several of the peer leaders, we selected informants either on the basis of our acquaintance with them through informant contact, reference to other individuals from our initial interviews, recommendation from workers who knew the informants through more extensive interaction on a day to day basis, or a combination of these.

3. An Investigation of Two Phonological Variables in PRE

With the preceding background information in mind, we may now proceed to look at two linguistic variables in PRE as used by second generation Puerto Rican teenagers in Harlem. Our investigation is based on the analysis of the linguistic variable as formulated in sociolinguistic studies within the last several years. Perhaps the most significant contribution of recent sociolinguistic studies has been the discovery that various social dialects in the United States are not differentiated from each other by discrete sets of features, but by variations in the frequency with which certain features occur. Studies of social dialects in

the United States are not differentiated from each other by discrete sets of features, but by variations in the frequency with which certain features occur. Studies of social dialects in the United States in the mid and late 1960's clearly indicated that differentiation of dialects could not be indicated by simple categorical statements, but were more typically, quantitatively distinguished. Furthermore, many instances of fluctuation in the usage of socially diagnostic linguistic features were found to be inherently variable rather than dialect borrowing or mixture. Labov's study of the social stratification of English in New York City (1966), Shuy, Wolfram and Riley's sociolinguistic study of Detroit (1968), Labov et al's treatment of Black English in New York City (1968), the study of Black speech in Detroit by Wolfram (1969), Anshen's study of Black and white speech in North Carolina (1969) and Fasold's (1972) account of black working class speech in Washington, D.C. all indicate the essential variable parameter in the study of social dialects in the United States and the extent of inherent variability. These studies further point out that there are both independent linguistic and non-linguistic constraints which directly affect the variability of items. Some of these studies conclude further that these constraints should be formally incorporated into the representation of a linguistic rule. In this section, we shall undertake a variable analysis following the procedures employed in other variable studies of social dialects. These variables will allow us to illustrate some of the basic principles which emerge from the study of PRE in terms of current sociolinguistic analysis.

3.1 Morpheme-Final //θ//[2]

In morpheme-final position, we have observed a number of different variants for the standard English //θ// among our Puerto Rican informants.

These variants may occur in words such as tooth, south, bathroom, etc. In Table 1, the incidence of some of the variants we have isolated is given for our Puerto Rican informants.[3]

Variant	Phonetic Realization	No.	% of Total
θ	[θ] or [tθ]	56	38.9
f	[f]	64	44.4
ø	No phonetic realization or an assimilated fricative such as [f], [s], or [š]	18	12.5
s	[s] or [z] when not followed by a sibilant	5	3.5
Total		144	

Table 1: Distribution of Variants in Morpheme-Final Position for Puerto Rican Informants

It is noted that there are a number of different variants which are realized for standard English //θ//. Since these variants represent various types of phonological processes in PRE as they relate to the possible language sources to be found in this variety, it is instructive to look at them individually.

3.1.1 The s Variant: A Case of Vestigal Interference

Of the variants which we have delimited above, the one which is most predicatable from Spanish influence is s (cf. Jameson 1967:110-113). Puerto Rican Spanish, like many varieties of Spanish spoken in Latin America, does not normally use [θ], where standard English employs [θ]; s is the common interference variant which is observed. That is, a Puerto Rican

Spanish speaker learning English will often use s for standard English θ, so that tooth and both may be realized as [tus] and [bos] respectively. It would thus appear that the few instances of s which cannot be attributed to the assimilation of //θ// to following fricativization (cf. Section 3.1.2) may be a type of interference. However, when we look at the incidence of this variant, we find that it is very infrequent; so infrequent that we may question whether it is actually a part of a speaker's competence.

In the case of Puerto Rican Spanish speakers learning English, final //θ// may commonly be realized as s because of their failure to keep the two rule systems disjunctive. But speakers who have merged systems with respect to this phonological rule may be expected to use s considerably more frequently than the 3.5% which is actually observed in our corpus. Presumably, as a speaker acquires genuine competence over the rules of two languages disjunctively, the incidence of s for //θ// will be reduced accordingly. At the point that it becomes infrequent enough statistically to fall into the range of semi-categorical absence (i.e. less than 5% out of all the potential places in which it might legitimately occur) we may say that, for all practical purposes, he has a disjunctive competence with respect to this feature.

However, when occasional lapses indicate incomplete disjunction, it seems appropriate to speak of 'vestigial interference'. Ultimately, of course, the definition of such a concept is a statistical one dependent upon the validity of our cut-off point as an indication of rule disjunction between two languages or dialects.

What is essential to note here is that our second generation Puerto Rican informants have not as a group established the incidence of s as

a correspondent for standard English ə in morpheme-final position. It is only a small minority of informants who use it at all.

With respect to those informants who show some incidence of s, however, we may raise the question of how habitualized it is in their speech. If we find that for these informants there is a substantial frequency of s occurrence, we may want to postulate that there is one variety of PRE in which s has become incorporated as an integral part of the dialect. But when we look at the 4 informants who account for the few examples of s, we find that it is only used 13.5% out of all potential cases for these informants. The small number of informants who use, and the relative infrequency of its usage by those who do reveal it, would thus appear to justify our dismissal of the s variant as a matter of vestigial interference. Its obvious failure to be incorporated as an integral part of PRE by second generation speakers causes us to hesitate writing any sort of rule for PRE in general which might account for this variant. Thus, our designation of items as vestigial in their interference, although a statistical decision, does have important implications for the inclusion or exclusion of particular items in formulating rules for the varieties of PRE. In a sense, the type of procedure by which we dismissed s is related to the importance attached to distinguishing between language competence and performance. In many cases, this distinction may be more statistically based than has generally been recognized.

3.1.2 The Ø Variant: A Case of a Feature Common to Standard and Non-standard English Dialects

Unlike the s variant, which we dismissed as outside of the rules which we will need to account for out data in some reasonable way, Ø is

realized with frequency which cannot be dismissed quite as readily. At least when it is followed by a consonant, it would appear that its incidence must be accounted for as a part of the phonological rules which we must posit to describe this dialect adequately. All but one instance of $\underline{\emptyset}$ occur when followed by a consonant across either word or morpheme boundaries. Since there is only one instance of $\emptyset$ (less than 5%) when potential $\underline{\theta}$ is followed by a non-consonantal environment, we will not be concerned here with this single rare case. We shall instead concentrate our attention upon the number of instances which are followed by a consonant in order to determine what it is about the nature of consonants that may cause the surface realization of //θ// to be $\underline{\emptyset}$.

In order to understand the increased incidence of $\underline{\emptyset}$ realization before words which begin with a consonant, it is necessary to look more closely at the nature of assimilation in both standard English and various nonstandard dialects of English.[5] In casual style //θ// may assimilate to the following consonant if it is a voiceless fricative so that we get sentences like those in 1(a-c).

1. (a) [kip yɪr ma^{U} šət] 'Keep your mouth shut'

   (b) [hi hæzə ma^{U} fɪr ɛvri əke^{I} žɪn] 'He has a mouth for every occasion'

   (c) [hIz ma^{U} siz vIčrio^{U}l] 'His mouth seethes vitriol'

Although we have not done a rigorous frequency tabulation, it is quite clear that the assimilation process is more common before the sibilants [s] and [š] than it is before the labio-dental fricative [f].[6] Phonetically this might be expected because of the tongue involvement

with [s] and [š] and its non-involvement in [f]. The rule accounting for this assimilation may be formalized as:

2. $$\theta \rightarrow \left(\begin{bmatrix} \alpha\text{strid} \\ \beta\text{cor} \\ \gamma\text{ant} \end{bmatrix} \right) \; / \; \underline{\quad} \; \# \; \begin{bmatrix} -\text{voc} \\ +\text{cont} \\ \alpha\text{strid} \\ \beta\text{cor} \\ \gamma\text{ant} \end{bmatrix}$$

In addition to the regressive assimilation (i.e., the assimilated sound precedes the conditioning sound) which we have discussed with reference to//θ//above in standard English, it is important to note one type of progressive assimilation: namely, when //θ// follows the sibilant s. Thus, the assimilation of//θ//in an item like sixth must be accounted for by the preceding s:

3. (a) [sIKs $ta^{I}m$] 'sixth time'
   (b) [sIKs æpəl] 'sixth apple'

This assimilation must be considered as peculiar to sibilants, since a preceding f assimilates to the θ in standard English rather than the θ to f, so that we have:

4. (a) [fIθ $ta^{I}m$] 'the fifth time'
   (b) [fIθ æpəl][7] 'the fifth apple'

Therefore, we must posit a rule in standard English to account for 3 but not 4. This is formalized as:

5.

$$\theta \rightarrow \left(\begin{bmatrix} +\text{strid} \end{bmatrix} \right) \quad / \quad \begin{bmatrix} -\text{voc} \\ +\text{strid} \\ +\text{cor} \end{bmatrix} \quad \# \quad ____$$

With our above discussion concerning the nature of //θ// assimilation in standard English in mind, we may now return to the cases of ∅ realization we have encountered with our Puerto Rican informants. Is this exactly the same type of phenomenon as that which we observe in standard English, or is it different? To begin with, we may note that over 70% of all //θ// before the fricatives we mentioned previously (i.e., f, s, š) are absent (when just sililants are considered it is over 90%). When we compare this figure with the figures for other consonants, we find the contrast quite apparent, for the realization of ∅ before other consonants is less than 5 per cent. This plainly indicates that the assimilation process which we have observed for standard English is very much operative for this variety of English as well. Our conclusion, then, is that the nonstandard variety of English spoken by our Puerto Rican informants simply shares the assimilation rule for morpheme-final //θ// that exists for standard and other nonstandard varieties of English.

3.2.2 The f Variant: A Case of Linguistic Assimilation to Black English

Having accounted for the ∅ surface realizations for //θ// in terms of a phonological process which is general to a number of different varieties of English, let us know turn our attention to the incidence of f realization. Of the socially stigmatized variants, this is by far the most frequent. In looking at the source for this variant, we must first rule out the matter of language interference from Spanish. The variant f does not normally

occur in morpheme-final position in Spanish so that it would be difficult to explain its realization in terms of influence from Spanish. As we have seen earlier, the expected interference variant for standard English θ by Spanish speakers is s, but there are very infrequent realizations of s. In accounting for f, therefore, it is reasonable to turn to the structure of Black English, where it is the most common correspondent for standard English θ in morpheme-final position (cf. Wolfram 1969: 82-95). The following table indicates the incidence of the variants comparing the the black and Puerto Rican informants.

Variant	PR		Black	
	No.	%	No.	%
θ	56	38.9	8	17.0
f	64	44.4	36	76.6
Ø	18	12.5	3	6.4
s	5	3.5	-	--
Total	144		47	

Table 2: Comparison of Variants for θ in Morpheme Final Position for Puerto Rican and Black Informants

Table 2 plainly indicates the common use of [f] for morpheme-final //θ// among our black and Puerto Rican informants. The black group as a whole, however, shows a significantly greater frequency (Chi square =13.18 $p < .001$) frequency of the f variant when compared to the Puerto Rican group).

Up to this point, we have considered the Puerto Rican group of informants as a homogeneous group. But there are various ways in which we might divide this group into subgroups. One of the ways in which we

we might divide this group into subgroups. One of the ways in which we might distinguish groups of Puerto Ricans is on the basis of their black contacts. Although it is virtually impossible to find second generation Puerto Ricans in East Harlem completely isolated from blacks because of the residential distribution, some Puerto Ricans have integral peer contacts whereas others do not. Our background information and observation permits us to distinguish two groups of Puerto Ricans with respect to black contacts (1) those who show extensive peer contacts with blacks and (2) those who have restricted peer contacts with blacks.[8] We may hypothesize that the f variant, an assimilated Black English feature will show greater frequency for those Puerto Ricans with extensive black contacts than those with restricted black contacts. This hypothesis can be tested by comparing the two groups of Puerto Rican informants with the black informants. The comparison of these three groups is given in Table 3.

No. Inf.	Occ. f	Occ. θ	% f
Black (10)	36	8	81.8
PR with Extensive Black Contacts (6)	20	3	87.0
PR with Limited Black Contacts (23)	53	44	54.6

Table 3: Comparison of f realization Morpheme-Final Position for Blacks, Puerto Ricans with Extensive Black Contacts, and Puerto Ricans with Limited Black Contacts.

The distribution of f realization in the above table is quite straight-forward, and our hypothesis is confirmed. The Puerto Ricans with extensive black contacts match (in fact, they exceed, but not to any

significant degree) the extent of f realization found among the black informants, whole the Puerto Ricans with limited black contacts reveal significantly less f realization than both groups. ($X^2 = 9.78$, $p < .01$) This is the type of distribution we would expect from a Black English variant such as f.

Our brief overview of the θ variable points us to three different types of language relationships. The s realizations can be attributed to vestigal interference from Spanish, the ∅ operates in a way common to a number of standard and nonstandard dialects of English, and the f variant is related to specific assimilation to the phonological system of the surrounding black community.

3.2. Post-Vocalic Syllable-Final d Deletion: A Convergent Process

In the preceding variable, we saw that the interference variant from Spanish-influenced English and the English variant from the surrounding black community were in competition: Black English called for [f] (varying with the standard English variant [θ]) and Spanish-influenced English called for [s]. It was obvious that the Black English realization was favored for all speakers, even for those with restricted black contacts. Those with more direct black contacts, of course, were influenced to a significantly greater extent than those with restricted contacts.

Now we may turn our attention to a variable for which a common variant may be predicted from either Puerto Rican Spanish-influenced English or Black English. This is the case of syllable-final post-vocalic //d// in words such as good, stayed, and wanted. One of the characteristic features of Puerto Rican Spanish is the deletion of //d// in syllable-final position. Thus, in words like verdad 'truth' and ciudad 'city', the final

d may be deleted, giving [bɛrdá] and [siuðá] respectively. Similarly syllable-final, post-vocalic d deletion had been described for Black English by both Wolfram (1969) and Fasold (1972), so that this phonological process is well-documented as an integral part of Black English in different geographical regions.

It should be noted that the tabulation of //d// includes both //d// which was a morphophonemic representation of the grammatical suffix -ed (i.e., following a vowel as a prayed) and //d// which was an inherent part of the stem of a word. The grammatical function of //d// includes its usage as a past tense marker (e.g., He cried for a long time), a derived adjective (e.g. He's a colored kid), and a participle (e.g. He was tried for murder).

3.2.1 Variable Constraints on //d// Deletion

In order to tabulate the relative frequency of deletion, it is necessary to look at several different types of environments, since they may have considerable effect on the incidence of //d// deletion. Previous studies of post-vocalic syllable-final have pointed to several distinct types of environments which may affect the ∅ realization. Some of these general types of environments which have been seen to affect variability for a number of features; others appear to be more specific in their application.

One of the most commonly noted influences on variability has been the presence or absence of a vowel following a segment. Sutdies of variability in Black English by Wolfram (1969) and Fasold (1972) have revealed this following environment to be one of the major constraints on //d // deletion. Both of these studies have indicated that a following vocalic environment inhibits the incidence of ∅. In Table 4, we present the figures for //d//

deletion based on whether the following segment is vocalic or non-vocalic. The non-vocalic environment includes both a following consonant of some type and pause. Figures are given for the 29 Puerto Rican informants, based on tabulation of not more than 35 grammatical and 35 non-grammatical examples for each informant taken from the free conversation section of our interview (In actuality, the figures are considerably lower since the grammatical examples are usually quite restricted).

	_____##Vowel	____##Non-Vowel
No. Del/Tol	70/340	427/737
% Del.	20.6	57.9

Table 4: Deletion of Post-Vocalic, Syllable-Final //d// in Following Vocalic and Non-Vocalic Environments

The difference between $\underline{\emptyset}$ realizations for the two environments is quite clear-cut; a following vowel inhibits the operation of //d// deletion. This constraint is the same as that identified by both Wolfram (1969: 99) and Fasold (1972) for the deletion of //d// in Black English.

Another factor which previous studies have shown to affect the variability is stress. The general principle which has been observed is that occurrence in an unstressed syllable favors the deletion of segments, whereas occurrence in a stressed syllable inhibits deletion. This has been observed for a number of variables, and has specifically been described for //d// deletion by both Wolfram and Fasold. The relative frequency of //d// deletion in stressed and unstressed syllables can be observed in

Table 5. Since we have already noted the importance of a following vocalic or non-vocalic environment, it is appropriate to consider the effect of stress in terms of these environments. There are two main types of environments which we have classified as unstressed in our tabulations. This includes //d// which occurs in an unstressed syllable of a polysyllabic word, such as treated, stupid, or bastard, and //d// which is part of a modal auxiliary which in turn occurs as unstressed in a verb phrase. This occurs in sentences such as I don't think he should go and John could come too. Stressed environment refers to any instance of //d// which occurs in a stressed syllable of a word, such as betrayed, head, or showed.

	___## Vowel		___##Non-V	
	Stressed V___	Unstressed V___	Stressed V__	Unstressed V__
No. Del/Tot.	54/293	16/47	245/481	182/256
% Del.	18.4	34.0	50.9	71.1

Table 5: Effect of Stress on Final //d// Deletion

Two observations can be made on the basis of Table 5. First we observe that stress affects the deletion of //d//. As we might expect, //d// is deleted more frequently in a stressed syllable than an unstressed one. But it is also noted that stress does not have the same effect on variability that a following vowel or non-vowel may have. When the crucial by-products are compared (i.e., Unstressed V___##V and Stressed V___## Non-V), it is apparent that the following vowel or non-vowel is the first order constraint and stress or non-stress the second order.

Up to this point, we have not taken into account the fact that some instances of //d// are grammatical markers and others are an inherent

part of the lexical item. As we have mentioned previously, //d// may be one of the morphophonemic realizations of the -ed suffix in English occurring after vowels. In previous tabulations of phonological variability, it has been shown that the grammatical function of a segment tends to inhibit deletion (cf., for example, the discussion of Labov, et al. 1968 or Wolfram 1969 concerning bimorphemic and monomorphemic consonant clusters) when compared with the same segment occurring as an inherent part of the word. Ma and Herasimchuk (1968) mention this difference for PRE but do not carry out any tabulations on the effect of grammatical versus non-grammatical functions of //d//. In Table 6, the deletion of grammatical //d// versus non-grammatical //d// is tabulated. Since we have already established the effect of the following vowel/non-vowel and stressed/unstressed syllable on the deletion of //d//, we shall consider grammatical/non-grammatical functions of //d// in terms of these previously distinguished environments. Only those cases of grammatical //d// following a vowel or r are considered. This means that all morphophonemic realizations of the -ed suffix as -Id (following an alveolar stop) are not included. Furthermore, instances in which underlying -Id forms have been assimilated to a d or t which is part of the stem (as in stard for started) are not considered here.

	Gram.	Non-Gram.	Gram.	Non-Gram.	Gram.	Non-Gram.	Gram.	Non-Gram.
No. Del./Tot.	6/35	48/258	5/19	11/28	14/34	231/347	40/54	142/202
% Del.	17.4	18.6	26.3	39.3	41.2	66.6	74.1	70.3

Table 6: Effect of Grammatical and Non-Grammatical //d// on Variability

Table 6 indicates that variability is affected on the basis of whether //d// is a grammatical marker or not. But it does not appear that this is a major constraint. In fact, the comparison of the cross-products indicates that it is a third order constraint, being order after the effect of the following vowel and stress. In only one case is there a slight discrepancy in cross-products (___##Non-V unstressed, grammatical marker and ___##Non-V unstressed, non-grammatical marker). The hierarchical ordered of the three constraints we have isolated above may be illustrated in Fig. 1.

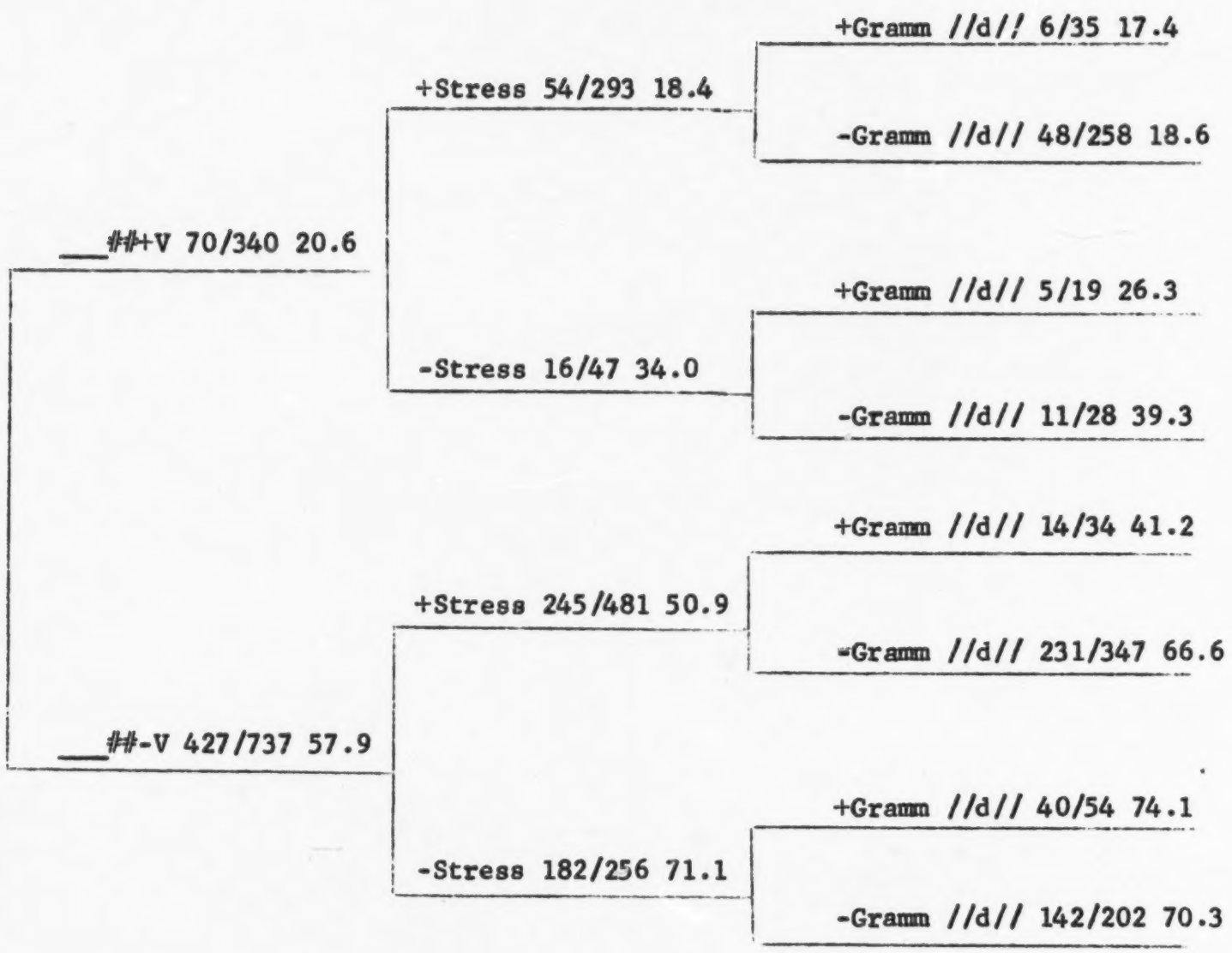


Figure 1: Hierarchical Ordering of Three Constraints on //d// Deletion

Following the conventions established for incorporating the hierarchical ordering of constraints into a description of PRE phonology which formally admits variability, we may summarize our conclusions concerning the effect of the various constraints on //d// deletion by the following rule:[9]

$$d \rightarrow (\emptyset) \; / \begin{bmatrix} V \\ B\text{ -stress} \end{bmatrix} \quad \begin{matrix} \ulcorner \text{-\#} \\ \\ \\ \end{matrix} \quad \underline{\qquad} \quad \text{\#\# A -V}$$

The rule indicates that the first order constraint is whether the underlying //d// is followed by vowel/non-vowel, second order whether the preceding vowel is stressed/unstressed, and third order whether it is a grammatical marker or not. Implicit in the use of capital Greek prescripts (used in the some way that Labov (1969) uses lower case Greek prescripts and Fasold (1972) uses integers) is the fluctuation of plus or minus values. The formally stated value in the constraint favors the operation of the rule while the opposite value inhibits it. Thus, for example, if the value of the following vowel is minus as stated in the rule (##A-V), the deletion rule is favored, but if it is +, then it is inhibited.

The relation of the variable constraints in terms of favoring and inhibiting deletion should by read following the principle of geometric ordering. That is, the relative frequency of constraints is to be read as follows:

Constraint Frequency on //d// Deletion

A	B	⊏
-V	-Stress	-# >
-V	-Stress	+# >
-V	+Stress	-# >
-V	+Stress	+# >
+V	-Stress	-# >
+V	-Stress	+# >
+V	+Stress	-# >
+V	+Stress	+# >

The incidence of deletion is greatest where all the values are identical to those given in the formalization, and least where all the opposite values obtain.

3.2.1 The Comparison of //d// Deletion in Puerto Rican and Black English

In our previous discussion, we have mentioned the fact that //d// deletion has been described for Black English, and on this basis we conclude that a certain amount of //d// deletion is an integral part of the general dialect. Since the surrounding black community is the main source of non-Puerto Rican contact, it is therefore important to compare //d// deletion for these two populations in order to see if we can attribute this process to linguistic assimilation from the surrounding community. In Table 7, we compare the tabulations of //d// deletion for black and Puerto Rican informants in our corpus. The figures are tabulated in terms of the three environmental constraints on variability we distinguished previously.

___#V

		Stressed		Unstressed	
		Gram.	Non-Gram.	Gram.	Non-Gram.
Black Informants	No. Del./Tot.	0/14	10/93	1/2	4/22
	% Del.	0.0	10.7	50.0	18.2
Puerto Rican Informants	No. Del./Tot	6/35	48/258	5/19	11/28
	% Del.	17.4	18.6	26.3	39.3

___//NON-V

		Stressed		Unstressed	
		Gram.	Non-Gram.	Gram.	Non-Gram.
Black Informants	No. Del./Tot.	14/33	62/183	3/10	35/69
	% Del.	42.4	33.8	30.0	50.7
Puerto Rican Informants	No. Del.	14/34	231/347	40/54	142/202
	% Del.	41.2	66.6	74.1	70.3

Table 7: Comparison of //d// Deletion for Black and Puerto Rican Informants

Where there are sufficient numbers of examples to allow comparison, it is obvious that //d// deletion is much more frequent in PRE than it is in Black English. Furthermore, categories with non-trivial numbers of examples suggest that the ordering of constraints for the two groups is identical. If we collapse the distinction between grammatical and non-grammatical functions of //d// because of the paucity of examples of grammatical //d// in some of the above categories, we find that there is a clear-cut difference in the degree of //d// deletion for the two groups for all environments. This combination of categories is given in Table 8.

	Black Informants		Puerto Rican Informants	
	No. Del./Tot.	% Del.	No. Del./Tot.	% Del.
Stressed ___##V	11/107	10.3	54/293	18.4
Unstressed	5/24	20.8	16/47	34.0
Stressed ___##NON-V	76/216	35.2	245/481	50.9
Unstressed	38/79	48.1	182/256	71.1

Table 8: Comparison of //d// Deletion for Black and Puerto Rican Informant

Table 8 leaves little doubt that //d// deletion is a process which is considerably more frequent in the speech of Puerto Ricans than blacks. If Puerto Ricans have the //d// deletion rule much more frequently than the blacks, we may ask whether this rule can be attributed simply to the influence of the surrounding linguistic community. In the previous discussion of morpheme-final //θ// we observed that the assimilation variant was found to a significantly lesser degree in the Puerto Rican community when it was compared as a whole to the black informants. If the realization of f for //θ// is a typical case of borrowing, and it appears to be so, then //d// deletion cannot be attributed simply to phonological assimilation from the surrounding black community.

It is at this point that we must turn again to possible influence of Puerto Rican Spanish which is carried over in the speech of second generation Puerto Ricans. We have mentioned that one of the characteristic features of Puerto Rican Spanish is the deletion of //d// in syllable-final position. (As in English, this is not a categorical process, but a

variable one.) There are, then, two possible sources for //d// deletion: the surrounding black community and Puerto Rican Spanish. We can hypothesize that it is the covergence of these sources, rather than one source in itself, that accounts for the higher incidence of //d// deletion among Puerto Ricans than blacks.

The possible convergence of sources for //d// deletion can be examined further by isolating the Puerto Rican informants who have extensive black contacts from those who have restricted black contacts as we did for the //θ// variable. Table 9 gives the breakdown of //d// deletion on the basis of thres groups: the black group (BE), the Puerto Ricans with extensive black contacts (PR/BL), and the Puerto Ricans with restricted black contacts (PR). The figures are broken down on the basis of the following environment and stress of the preceding vowel, as we did in Table 8.

	BE		PR/BL		PR	
	No.Del./Tot.	%Del.	No.Del./Tot.	%Del.	No.Del./Tot.	%Del.
Stressed __##V	11/107	10.3	17/64	26.6	37/229	16.2
Unstressed	5/24	20.8	3/14	21.4	13/33	39.4
Stressed __##NON-V	76/216	35.2	54/95	56.8	191/386	49.5
Unstressed	38/79	48.1	59/75	78.7	123/181	68.0

Table 9: Comparison of BE, PR/BL and PR Informants for //d// Deletion

The figures in Table 9 indicate that, with one exception, the incidence of //d// deletion is greatest for the PR/BL's, next greatest for the PR's, and least frequent for the BE's. The one exception (__##V in an unstressed syllable) is found in the category with the smallest number of examples which probably accounts for the discrepancy. We may hypothesize that the figures for the PR/BL group are due to the fact that these speakers reinforce the process of //d// deletion which they may assimilate on the basis of their close black contacts with the process that might be attributable to Spanish influence.

3.4 Some Sociolinguistic Principles

Although we have only examined two phonological variables of PRE in some detail here, they illustrate several important sociolinguistic principles which have been verified in our examination of a number of different variables. Some of these principles are evident in our description here while others are evident from our more detailed study of PRE (cf. Wolfram, et al 1971, particularly chapters three and four).

3.4.1 Vestigal interference and Second Generation Puerto Ricans

When there are two different variants for which correspond to a standard English form, one from Spanish-influenced English (i.e., an interference variant) and one from assimilation to black English, the occurrence of the interference variant is relatively infrequent. Thus, we saw that the s or interference variant for standard English morpheme-final //θ// was infrequent in the speech of our Puerto Rican informants. In fact, it was so rare, that we have labled it "vestigal interference". The concept of vestigal interference, allows us to account in a reasonable

way for some variants which are found in our Puerto Rican informants but not our black informants while minimizing the systematic integration of these realizations in the English of second generation Puerto Ricans. Although our definition of vestigal interference is based on an arbitrary cut-off point, it does have important implications for how we are going to represent the phonological system of PRE for these speakers. Spanish-influenced English without parallel processes in Black English is minimal despite the fact that practically all of our informants spoke Puerto Rican Spanish as their first language and still speak it to some extent in the home. Although we may speculate concerning the importance of Spanish influence at earlier stages of bilingualism, we must conclude that by the time they are teen-agers, straightforward interference in minimal. In this sense, the incidence of [s] for morpheme-final //θ// seems to be quite typical of a number of types of segmental Spanish interference. Our second generation informants simply do not reveal the types of interference variants that their first generation parents do. For example, a first generation Spanish immigrant will often have difficulty producing and discriminating between vowel sounds like [ɛ] and [æ]. But this is quite atypical of our informants. Given the word pairs bet and bat and asked to produce them and then determine if there was any difference between the way they were pronounced, only one of our 29 Puerto Rican informants pronounced them the same and two informants said they sound the same (although they actually pronounced them differently). The same observation can be made about a number of predicted interference variants from Spanish. Although the actual interference variants may not be quite infrequent, this is not to say that the occasional occurrence may be sufficient to identify a speaker as being Puerto Rican, since a particular variant need not be frequent in

order for a hearer to "pigeonhole" a speaker. It appears, however, that suprasegmental factors such as rhythm (in particular, the occasional occurrence of syllable-timing and its concomitant phenomena such as the lack of vowel reduction in unstressed syllables) and intonation are more crucial in identifying a speaker than the occasional segmental interference variants. We thus conclude that the interference variants so characteristic of first generation Puerto Rican immigrants learning English are of minimal significance in the speech of second generation. Straightforward interference has not become habitualized in the speech of the second generation.

3.4.2 Convergent Processes

Our discussion of vestigal interference in the above section refers only to variants found in Spanish-influenced English which have no parallel processes in the surrounding Black English speaking community. But there are also variants in Spanish-influenced English which may parallel the variants which would be predicted from the surrounding black community (but not standard English), as we illustrated in our syllable-final //d// variable.

There are actually two kinds of Puerto Rican Spanish influence which may result in parallel processes between Black English and Puerto Rican English. In the first type, there is a correspondence in the morpheme structure sequence rules but both Spanish and Black English have identical processes operating on underlying forms. This is the case for //d// deletion. Both Black English and Puerto Rican Spanish have words ending in //d// as a part of their morpheme structure sequence rules, but there is a deletion rule operating analagously in both language varieties. The

second type of convergence involves differences in morpheme structure sequences. A different morpheme structure sequence for Puerto Rican Spanish results in interference in the English of Puerto Rican Spanish speakers which parallels the output of a Black English rule. For example, the fact that there are no word-final consonant clusters in Spanish results in the deletion of final members of consonant clusters in the English of many Puerto Ricans. Thus, test, ground and wild may be produced as tes', groun', and wil' respectively. In Black English, there is clear evidence for underlying word-final clusters (cf. Wolfram 1970), but there is a phonological operation which deleted the final member of the cluster. This results in an output for items such as test, ground, and wild identical to that caused by interference in Spanish influenced English, even though for different reasons.

When we have convergent processes, we find a quite different frequency distribution as compared with a straightforward interference variant and an assimilation variant (cf. 3.4.3). For convergent processes particularly of the first type we find that the PRE speakers as a group may reveal a greater incidence of the variant than in Black English. With straightforward assimilation variants, howevwr, the group shows a reduced frequency when compared with the surrounding Black English speaking community. Although the Puerto Rican group as a whole may show a greater frequency of a convergent variant than the Black English speaking group, it is observed that the Puerto Ricans with extensive black contacts show a greater frequency than Puerto Ricans with restricted black contacts. We hypothesized previously that the higher figures for the PR/BL group may be due to the fact that these speakers are reinforcing the process of //d// deletion which may assimilated on the basis of their close contacts

with blacks with the more general convergence of these processes predictable from Spanish influence.

Another essential observation concerning convergent processes is the parallelism in the types of environmental constraints on variability. The types of linguistic enviornments which effect variability and the ordering of the constraints is seen to be identical for the blacks, the Puerto Ricans with extensive black contacts, and the Puerto Ricans with restricted black contacts. The recurrence of particular types of environmental constraints across groups in our study and in other studies (e.g., Labov, et. al 1968, Wolfram 1969, Fasold 1972) shows sufficient similarity for us to ask whether, in fact, we are dealing with universal constraints on variability rather than language or dialect-specific ones. For example, whether a segment functions as a grammatical marker or an inherent part of a lexical item has some effect on variability. And, in all cases, the effect is similar: a grammatical marker tends to inhibit the deletion or reduction of a segment. Similarly, unstressed syllables invariably tend to favor reduction or deletion to a greater extent than stressed syllables. And, we have seen that deletion of consonants is invariably greater when they are followed by another consonant. It is difficult to conceive of any situation in which the opposite effect might take place (e.g., grammatical marker would favor deletion, stress would favor reduction, following consonants would favor the retention of consonantal segments). If then, we are dealing with universal effects on variability, we may ask why these constraints are not simply built into our metatheory of language as it relates to optional rules. That is, the metatheory could incorporate some sort of representation of universal effects on optional rules. If we did this, there would be no need to specify the constraints for each language or dialect as we have done for

//d// deletion. This might be a very acceptable alternative if we did not regard the hierarchical effect of these constraints as part of a speaker's competence. But if we accept the fact that the hierarchical effect of these constraints is a matter of competence, then we must specify the constraints for each language or dialect, because the order of the constraints may vary considerably. In one case, the effect of stress may be geometrically ordered before the effect of grammatical/ ungrammatical markers, whereas in another case the order may be reversed. We conclude, then, that there are probably universal constraints on variability which need to be built into our metatheory of language, but the ordering of these constraints is language or dialect-specific, and therefore must be incorporated into a specific grammar of a language.

3.4.3 Assimilation Variants

In addition to the interference variants which are predictable on the basis of Spanish influence, and the convergent processes of Spanish-influenced English and Black English (as opposed to standard English), there are also variants which can be reasonably accounted for only in terms of assimilation to Black English.[10] Our investigation of [f] for standard English //θ// in morpheme-final position was such a case. Other examples might be found in the monophthongization of certain vowel glides (e.g., ay, oy), certain types of negatives (e.g., Didn't nobody do it as a declarative statement), and certain verb uses (e.g., the use of habitual be as in Sometime he be busy and sometime he don't). It is noted that at least with phonological features (cf. Section 3.4.4 for the comparison of phonological and grammatical features), the assimilation variants can be found among both those Puerto Ricans with extended black contacts and those with restricted black contacts. This means that the assimilation

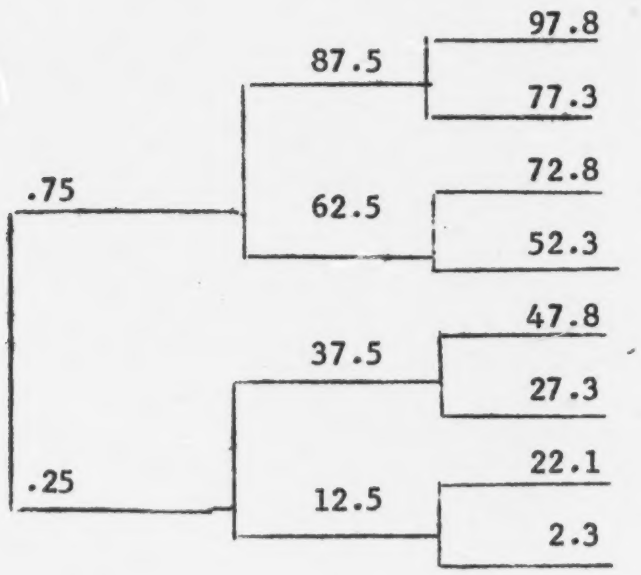
process is not all direct. That is, a Puerto Rican speaker with restricted black contacts may not necessarily be dependent on first-hand contact with blacks in order for assimilation to take place. He may be assimilating the variant from other Puerto Rican speakers who have assimilated it through more direct contact.

The frequency level of assimilation variants also reveals different distributions from those of the interference and the convergent variants. In the case of assimilation variants, the PRE group as a whole shows a frequency level considerably greater than the interference variants, but a frequency level which is significantly below that of the Black English group. When the group is broken down in terms of the extent of black contacts, the Puerto Ricans with extensive black contacts much more nearly approximate the frequency levels of the black group than the Puerto Rican group with restricted contacts, but it does not generally exceed the black group in frequency to any significant extent. In this regard, it is unlike the frequency distributions of some convergent realizations.

One of the most important observations with respect to the assimilation of variants which our study has shown is that concerning the assimilation of constraint orders on variability. Although there are considerable differences in the frequency distributions of variants between the groups, it is essential to note that the frequency difference does not result in different orderings of constraints on variability. The types of constraints on variability and the orders of these constraints tend to be assimilated along with the actual variants. For example, if we were to compare morpheme-final [f] for //θ// with the same realization in morpheme-medial position, we would find that morpheme boundary favors the indicence of f in both Black English and the PRE

(cf. Wolfram et. al 1971). And if we were to extend our analysis to other orderings of constraints, we would find the orders to be similar (cf. ay variable in Wolfram, et. al. 1971).

In our presentation of variable rules for //d// deletion in PRE that we discussed previously, we have operated under the assumption that there is regularity in the ordering of constraints for individual speakers (i.e., ideolects) which is represented in the formal representation of the dialect(s). For the most part, this observation is borne out in our comparison of the constraints formulated for individual speakers with those formulated for the group. That is, if we take the constraints we have formalized for PRE and compare them for the individual speakers, we will find the constraints to be quite regular. There are, however, two exceptions to this regularity, which make the characterization of the speech represented for the social group as a whole appear to be more systematic than the speech of an individual. In some cases, there are not sufficient numbers of examples in some of the sub-categories of the constraints to reproduce the clear-cut effect of the constraint orders as it is represented for the group as a whole. This type of inconsistency arises simply from the limited number of examples available for a given informant and would be remedied by a more adequate population of examples. There are, however, also instances where there appear to be sufficient examples for discovering the regularity for individual speakers that we have represented for the group, yet we do not get the expected regularity. These cases are somewhat more difficult to dismiss. It is important to note that these instances are restricted to cases where the ratio of effect on the various constraints is relatively close. For example, suppose we have a case where the ratio of the geometrically ordered constraints on variability is as follows:



$$X \longrightarrow (Y) / \quad AF_1 \quad \frac{\quad}{[BF_2]} \quad F_3$$

In the above ordering, we would certainly not expect individual deviation in terms of the first and second order constraint. But the second and third order constraints might reveal less regualrity because their relative effect is much closer. It would appear that the closer two constraints are in terms of the ratio of their effect, the more likelihood there is that we can find some individual discrepancy in the ordering of constraints. For example, if the effect of one constraint is 4 to 1 and another constraint is 5 to 4, we would certainly not expect the reordering of constraints. But if the effect of one constraint is 4 to 3 (i.e., the rule will be effected 4 times in a given environment to every 3 times it is not) and another constraint is 5 to 4, then we might expect some individual reordering of constraints even within a relatively homogeneous group of speakers.

For the most part, of course, we are impressed with the amazing consistency with which constraints are ordered identically from speaker

to speaker and social group to social group. The main differences between groups are only matters of relative frequency. The actual comparative ratios which might make two constraints susceptible to reordering are, of course, arbitrary at this point. We would certainly not expect two constraints with effect ratios of 4 to 1 and 9 to 8 to reverse order, whereas we might expect effect ratios of 9 to 8 and 8 to 7 to be more susceptible to reordering. But the actual cut-off point for constraint reordering (and, in fact, the cut-off point for representing constraints formally in the grammar) is quite arbitrary and can only be determined through empirical investigation.[11]

3.4.4 Phonological and Grammatical Assimilation

Although we have not discussed grammatical assimilation to Black English, it should not be assumed that grammatical variants will necessarily assimilate in identical ways to phonological variants. A preliminary study of the assimilation of phonological and grammatical variants, in fact, indicates that there is a basic difference when assimilation variants are separated as to phonology and grammar. To some extent, the influence of Black English phonological features is common to both Puerto Ricans with extended black contacts and those with restricted black contacts, the differences between the groups being quantitative. We thus see that a feature like [f] realization for word-final //θ// is an intregral part of all varieties of PRE. On the other hand, an examination of multiple negative forms unique to Black English in New York City (e.g., Didn't nobody do it as a declarative sentence) and the habitual function in the use of be as a finite verb (e.g., Sometime he be busy and sometime he don't cf. Fasold 1969) are characteristic only of Puerto

Ricans with extensive black contacts. Puerto Ricans with restricted black contacts tend to show the categorical absence of these forms.

Furthermore, where both grammatical and phonological processes are assimilated in the speech of Puerto Ricans (mainly for the Puerto Ricans with extensive black contacts) the grammatical processes are assimilated as grammatical processes and the phonological processes as phonological ones. At first glance, this might appear to be trivial observation, but a closer examination of some of the features which might be interpreted to result from either a grammatical or phonological process indicates that this is a significant discovery. For example, suffixal Z absence in Z_1 (e.g. cent for cents), Z_2 (e.g., boy hat for boy's hat) and Z_3 (e.g., He run for He runs) might be the result of either a phonological or grammatical process. Likewise, certain types of suffixal D_1 (e.g., The man walk out yesterday), D_2 (e.g., He was mess up) and D_3 (e.g., The mess-up man) may be the result of either phonological or grammatical processes. Fasold (1971) clearly demonstrates the potential ambiguity of various surface realizations and the criteria for determining whether these realizations are the result of phonological or grammatical processes. Fasold specifically mentions the following characteristics which help determine whether the absence of a particular surface form is the result of phonological or grammatical rules.

1. If the absence is accounted for syntactically, it is expected that the operations in the phonological component will have no influence on the output, but if it is the result of phonological deletion rules, the deletion should be heavily influenced by phonological characteristics.

2. Irregular forms will be effected in grammatical deletion.

3. Hypercorrection will be evident if the absence of a surface form is due to the lack of underlying units in the syntactic component. If, however, surface absence is due to the deletion of a low level phonological rule, hypercorrection will not be expected.

4. Grammatical sensitivity will be more evident in cases where surface absence is due to grammatical rules, whereas surface absence which is the result of phonological rules will evidence phonological sensitivity. That is, grammatical variability will likely reveal sensitivity to grammatical environment and phonological variability to phonological environment.

5. Phonological deletion of segments which function as grammatical markers will reveal analogous deletion of segments which are grammatical markers, whereas grammatical deletion will not.

Applying Fasold's principles to suffixal Z and D absence in Black English, it has been concluded that Z absence in Black English is the result of a grammatical process and D absence the result of a phonological process. Suffixal Z absence affects all morphophonemic realizations of underlying Z (e.g., /z/, /s/, /əz/) whereas D absence is primarily restricted to certain phonological shapes of D (particularly //d// and //t// which occur in consonant clusters). Furthermore, irregular past tense verbs are not affected by the phonological process effecting D (e.g., go - went) but regular past tense formation which result in clusters subsequently reduced by a word-final consonant cluster reduction rule. Postulating that there is no underlying Z_3 morpheme, it is found that Z_3 hypercorrection (e.g., I goes, you goes, etc.) is observed to considerable extent in formal situations by some speakers of Black English. It is further noted that suffixal D is very sensitive to a number of phonological constraints (e.g., following vowel or non-vowel, stop + stop

cluster as opposed to stop + continuant cluster, etc.) whereas suffixal Z is sensitive to grammatical constraints (e.g., whether it is Z_1, Z_2 or Z_3). And finally, suffixal D deletion shows a clear analog to phonological processes which operate on identical segments not functioning as grammatical markers (e.g., mist reveals deletion of the final t as in missed), whereas suffixal Z does not reveal the same close parallelism.

Although some of Fasold's criteria for determining phonological and grammatical processes are not completely relevant to the study of D and Z morphemes in PRE, we come to the same conclusion concerning suffixal D and Z deletion; D deletion is primarily the result of a phonological process whereas Z is the result of a grammatical process. For example, as observed in PRE, D deletion shows the sensitivity to phonological constraints on variability that we expect of phonological processes, whereas Z does not. And there is a clear parallelism in the deletion of grammatical and non-grammatical marking //d// and //t// whereas Z does not nearly show the same tendency. The observation that the suffixal Z absence is the result of a grammatical process is particularly significant when we realize that Z deletion in Puerto Rican Spanish may be the result of a phonological process in which syllable-final //s// may be deleted. (cf. Ma and Herasimchuk 1968). At some stages in the acquisition of English by Spanish speakers, it is possible that suffixal D deletion may be due to grammatical rules, but it is quite clear that it is the result of a phonological process in the PRE we are studying here.

To say that grammatical and phonological processes in Black English will be assimilated as grammatical and phonological processes respectively in PRE does not, however, necessarily imply that the same general grammatical and phonological processes will be involved, although we would suspect that this will be the case in most instances. We are simply

claiming that the same general level of the language component is responsible for the derivation of surface forms. For example, some speakers of PRE with restricted black contacts show ARE copula absence (e.g., You nice, They nice) as an integral part of their dialect but show little or no incidence of IS deletion (e.g., He nice). For these speakers, it seems reasonable to hypothesize that ARE deletion may be related to the r-lessness which is quite typical of both black and white speech in New York City. In the first step, r is reduced to a schwa-like quality and in the second stage the phonetic vestige of r is eliminated (e.g., [dɛy $a^{ə}$] → [$dɛ^{ɪ}{}_{ə}$] → [dɛy]). This phonological process is somewhat different from the general rules for copula deletion including IS and ARE which Labov (1969) has postulated, but like the account of copula deletion for Black English by Labov, it originates in the phonological component of PRE.

3.4.5 The Emergence of New Rules

Up to this point, we can only allow for rules in PRE which are the result of either some aspect of Spanish influence or assimilation to English of the surrounding community. Theoretically, then, only those realizations which are predictable on the basis of Puerto Rican Spanish or the surrounding dialects of English (e.g., Black English of the immediately contiguous community, standard English of the classroom, etc.). This assumes that there is an isomorphic correspondence in the rules of PRE and the rules of the potential source languages or dialects. This assumption seems to be an integral part of the general theories of bilingualism, whether one essentially views the bilingual as having one merged system coexistent systems, or a combination of the two (i.e., parts of the system are merged and other parts coexistent). What these traditional views disallow is the operation of rules which might not be related iso-

morphically to one of the source languages or dialects. In the cases which we illustrated previously, this appears to be the case. Thus, the variants for morpheme-final //θ// and syllable-final //d// are related to either Spanish of the surrounding dialects of English. It therefore might be tempting to conclude that the traditional assumption is, in fact, quite correct.

Before doing so, however, we must look at what may be labeled pleonastic tense marking in one variety of PRE. In negative sentences containing the auxiliary didn't, tense may be marked pleonastically in this variety of PRE; that is, tense may be marked both in the negativized auxiliary and in the main verb. We get:

6. (a) I didn't did it. (27:8)[12]

   (b) I didn't meant to say it that way. (11:5)

   (c) We didn't never called it a game. (30:2)

This type of pleonastic tense marking is found for a significant minority of the Puerto Rican informants (eight of 27 informants who have five or more potential occurrences of past tense negatives with didn't). Like other features which we have discussed, pleonastic tense marking is not categorical; it varies with the Standard English forms of tense marking, as in:

7. (a) I didn't even give him carefare to their home. (27:12)

   (b) They didn't have what they usually have. (30:3)

The relative frequency of pleonastic tense marking for those speakers who use it ranges from 18 to 53 per cent, but generally the Standard English tense marking convention appears to be more frequent than its nonstandard

counterpart. (For those speakers who have at least one instance of pleonastic tense marking, 36 per cent, or 20 of 56 potential occurrences are realized with the double marking).

In attempting to account for the occurrence of pleonastic tense marking we cannot turn to other nonstandard or standard English dialects, as we have done for some of our other features. In particular, there is no apparent influence from Black English to account for this phenomenon.[13]

On the other hand, there is no direct influence from Spanish which might account for this pleonastic tense marking, since tense marking of this sort does not occur in Spanish. But the lack of isomorphic correspondence does not necessarily exclude indirect influence (e.g., hypercorrection) to account for these constructions. To begin with, we must note that in English, if there are no other Aux's (i.e., modal, have, be) in the verb phrase to which not can be attached, then do must be present. But in Spanish, there is no parallel requirement, so that we have:

8. (a) No hizo nada. 'He didn't do anything.'
   (b) El muchacho no vino. 'The boy didn't come!

We see that in English, the tense is marked in the Aux in negative verb phrases, whereas in Spanish, since no Aux is required, it can be marked only in the verb.

This difference leads us to account for pleonastic tense marking by hypothesizing that there are several stages of interference which the Spanish speaker may go through in learning English. In the first stage, the Spanish speaker attempting to speak English might simply substitute the Spanish negative for the negativized past tense Aux producing:

9. He no eat the food.

for Standard English:

10. He didn't eat the food.

It is important to note that the use of no for didn't leaves the sentence unmarked for tense. This stage seems to be a pidginized stage of language learning with respect to tense and negation. Thus a second stage might be hypothesized, in which the verb might take the tense marking in compensation for the fact that it is not attached to negativized auxiliary. Realizing that there is no tense marking, a speaker may simply place the tense marker on the verb by analogy with the Spanish tense marking scheme. This would result in:

This would result in:

11. He no ate the food.

The second state is often stabalized in the English of native Spanish speakers and contains both tense and negation on the basis of analogy with the Spanish system. With the acquisition of English didn't, the tense may still be retained on the verb since the attachment of the negative to a tense-carrying auxiliary is not found in Spanish. This, then, gives us:

12. He didn't ate the food.

In a sense, this sort of pleonastic tense form is simply a type of hypercorrection which results from rule generalization.[14] The generality of the rule by analogy results in the placement of a form where it is not required by the rules of the target language.

Although the stages described above might give a reasonable explanation for the occurrence of pleonastic tense marking in PRE, the fact remains

that this formation cannot simply be dismissed as language interference, and hence outside the scope of an adequate description of PRE. This feature must be described as an integral part of the tense system for one variety of PRE. Furthermore, it must also be pointed out that this rule cannot be derived simply by reference to the rules of English and Spanish. This rule, which copies the tense on the auxiliary and the verb, may be given roughly as:

13.	X	[+PAST]	do	NOT	[VERB]	Y	
	1	2	3	4	5	6	
	1		3+2	4	5+2	6	→

As written above, the rule can only operate when <u>not</u> is present in the sentence. This restriction is based on the fact that we have not found any instances of pleonastic tense marking among the affirmative counterparts. We do not have:

14. (a) *<u>He did came yesterday</u>.

(b) *<u>Did he came yesterday</u>?

Because there is so little potential for occurrences of the above type, it is difficult at this point to determine whether or not their absence is meaningful. At any rate, if these sentences were found (the second one seeming more likely than the first), it would be relatively simple matter to adjust the tense copying rule toward greater generality. It is expected that further data will allow us to further generalize this rule although we are not quite sure exactly how general it will eventually be written.

Our above description plainly demonstrates that traditional views of bilingualism have been too restricted in their assumption of isomorphic correspondences. We need to revise our assumptions concerning language contact to allow such innovations. Although it may be suspected that the majority of these innovations will be the result of hypercorrection historically, we may eventually find that this too, is pacing too restrictive a viewpoint, and that other processes may also result in innovations in the rules.

3.5 Conclusion

Although the study of PRE in Harlem has sufficient value in itself to warrant descriptive study, the preceding discussion has been more concerned with general sociolinguistic principles which emerge from the study of this language contact situation. This language situation has allowed us to apply some of the recent insights of sociolinguistic variability studies to a unique contact situation where several different sources may account for the resultant dialect. In particular, we have seen that the application of a quantitative dimension to the study of fluctuating speech behavior results in the emergence of important observations concerning the relative effect of linguistic assimilation. No doubt, some of the principles which we have focused on will have to be revised on the basis of further empirical data, but we are impressed with the convergence of our study with variable studies conducted on other populations. The regularity of ordered constraints on variable speech behavior for individual speakers and groups of speakers suggests that the goals of desriptive and explanatory adequacy in language do not give linguistics the luxury of cavalierly dismissing this regularity as outside the scope of a native speaker's language competence.

NOTES

1. I am indebted to William Labov, Marie Shiels, Albert Markwardt, Ronald Williams and Wolfgang Wölk for their helpful comments on an earlier version of this paper.

2. In addition to the variants isolated here, we have also delimited a few instances of the t variant. This variant is not of relevance for our discussion here so we have eliminated it from the tabulation. (For a discussion of this variant, cf. Wolfram 1971).

3. As used throughout this paper double slant lines refer to underlying representations as this notion is used in generative phonology.

4. Our description of Puerto Rican Spanish is dependent mainly on the work of Navarro Thomás (1948). For Puerto Rican Spanish in New York City, we rely on Ma and Herasimchuk (1968).

5. In actuality, this rule does not account for all the facts concerning //θ// assimilation, but it is sufficient for our purposes here. For a further elaboration of the rules involving //θ// assimilation in standard English, cf. Wolfram (1971).

6. We assume here that the incidence of ∅ is a matter of assimilation and subsequent deletion of the geminate cluster. The reasons for this interpretation are given in Wolfram (cf. 1971) but are not of concern here.

7. There are apparently some standard English speakers for who the appropriate assimilation is [fIf]. For these speakers, the progressive assimilation is stated more generally.

8. More detailed information is given on the criteria for classifying Puerto Rican informants into these groups in Wolfram, et al. (1971).

9. This rule does not incorporate all the constraints that may be recognized for syllable-final, post-vocalic alveolar stop deletion. In Wolfram, et al. (1971), two other constraints are incorporated, namely, whether the underlying form is //d// or //t// and whether the grammatical function of //d// is used as a past tense or non-past tense. The more complete representation of the rule is then:

$$\begin{bmatrix} -\text{voc} \\ -\text{cont} \\ +\text{cor} \\ +\text{ant} \\ -\text{nas} \end{bmatrix} \rightarrow (\emptyset) / \begin{bmatrix} V \\ -\text{stress} \end{bmatrix} \; D \; -\# \; \underline{\qquad} \; \#\#A\text{-}V \; \begin{bmatrix} B & +\text{voice} \\ E & -\text{PAST} \end{bmatrix}$$

10. This is not to say, that the features discussed previously are necessary unique to Black English, since many of them can also be found in Southern white speech. However, in a northern context such as New York City, they are found only in black speech due to the transformatien of many Southern features into class and ethnic patterns in a Northern context.

11. From a purely practical standpoint, there are difficulties in dealing with a great number of constraints, since the number of subdivisions in the geometric ordering is doubled every time another constraint is introduced. This means that if we isolate seven constraints, it is possible to get 128 branchings in the hierarchy (i.e., 2, 2x2, 2x4, 2x16, 2x32, 2x64 = 128). The expectation of getting sufficient examples to adequately determine the ordering of constraints naturally diminishes as the number of branchings proliferates. In most instances, we find that the clear-cut effect on variability is quite high in the first several orders of constraints, but that it tends to diminish after that.

    A problem of more theoretical consequence arises when all the branchings necessary to establish hierarchical orderings are not logically possible, either because of features of the specific language variety, or because of metatheoretical constraints on human language. The logical impossibility of some categories may disallow observing cross-products crucial for establishing the rank orders. (cf. Fasold 1972).

12. The number preceding the colon refers to the informant number and one following number refers to the page number in our typescript where it is found.

13. Both Fasold (personal conversation) and Labov, et al. (1968) have observed that this pleonastic tense marking may occur occasionally (probably as a type of performance error) among Black English speakers. There are, however, no instances of its use by our Black English informants in this corpus. Furthermore, the distribution of its usage in no way indicates that it is more common for PRE speakers with extensive black contacts; in fact, it is more common among our Puerto Rican informants with restricted black contacts.

14. It is essential here to note that the term hypercorrection has been used by sociolinguists in two senses, which we may refer to here as structural hypercorrection and frequency hypercorrection. Structural hypercorrection has been used to refer to the extension of the use of forms, based on an unfamiliarity with the structural restrictions that cover their usage. Thus, when BE speakers use -Z on non-third person forms because of their unfamiliarity with the Standard English rule governing -Z third person singular usage, we have an instance of structural hypercorrection. In the case of frequency hypercorrection, the structural placement may be correct, but the relative frequency exceeds the expected norms due to stylistic constraints on formality. This is the type of hypercorrection Labov referred to when he described the higher frequency of r usage by lower-middle class speakers in New York City when compared with midele class speakers in the more formal styles of speech (Labov, 1966).

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